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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,326	05/24/2001	Frank Chen	CHEN3210/EM/6828	1031

23364 7590 03/12/2004

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EXAMINER	
KING, JUSTIN	

ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/863,326	CHEN ET AL.	
	Examiner	Art Unit	
	Justin I. King	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *5/24/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "a first predefined value" in the last limitation's first line. Claim 1 has recited "a predefined value" in the fourth limitation's first line. It is unclear whether the first predefined value is the same as the predefined value. Claims 2-6 are rejected because they incorporate the claim 1's limitations.

Claim 3 recites the limitation "the stopping message" in claim 3's lines 2-3. Applicant may have meant the "terminating message".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olander, Jr. et al. (U.S. Patent No. 4,161,031), in view of Vinson et al. (U.S. Patent No. 6,453,334), and in further view of Kannan et al. (U.S. Patent No. 5,815,702).

Referring to claim 1: Olander discloses a programmable calculator including an input unit and output unit (figure 1). Olander's calculator is capable of calculating algebraic statement (claim 1), thus, Olander's processor, which calculating the algebraic statement is the claimed algebraic logic processor. Olander further discloses an interrupt detector (figure 3B, structure 65). Olander's calculator is capable of displaying and prompting user the executing status and error, and user can choose whether to suppress program halt and the error message (claim 6, column 2, lines 8-14). When Olander's calculator detects the error, halts the program, and prompts the error message, it sends an interrupt to the interrupt detector; such interrupt is the claimed request to stop processing.

Olander does not explicitly disclose a counter for counting based on a predefined value, and Olander does not explicitly disclose that the processor continues processing the request while waiting user's input.

Vinson discloses a system processing method, which terminates the process at the timeout (figure 2D, steps 258, 260); and Vincent further teaches that it is known to prompt user the option where to reset the timer for additional time (column 8, lines 43-50).

Although Vinson teaches that it is known to prompt user the option where to reset the timer for additional time, Vincent does not explicitly disclose whether the processor stops processing the task while prompting user the option. Kannan discloses that it is known not to stop the processing or application when an exception/interrupt is raised and user is prompted (abstract).

Hence, it would have been obvious to one having ordinary skill in the computer art to adapt the teachings of Vinson and Kannan onto Olander because Vinson teaches one to properly allocate system resources by prompting user for additional time at the timeout and have user to determine whether additional time is legitimate for further processing, and Kannan teaches one to continue processing while exception is raised so user can save unsaved data and the processing resource won't be wasted while waiting for user's input.

Referring to claim 2: Vinson discloses that the counter is reset and the terminating message (timeout) is clear (column 8, lines 43-50). None of the prior arts discloses the second predefined value. The second predefined value is the time for user to response to the option before the system selects the default value. An "Official Notice" is taken on that a preset length of time for user to select the options before the system enters the default value is well known; for example, the Microsoft® Windows® NT will prompt user to select the system/OS mode and it will select the default value if user does not select any option within a predefined time frame.

Referring to claim 3: The processor will process the task the same for either before the counter expired or after the counter reset; thus, the output unit will display the same message representing the processing after the stopping message is cleared as it does before the stopping message is generated.

Referring to claim 4: The means in Vincent's teaching, which receives "No" from user on the prompted options, is the claimed internal interrupt detector for detecting a request to stop processing.

Referring to claim 5: The external interrupt detector for detecting whether a specific key of the input unit is pressed by the user, is a known feature in the computer art. Under the Microsoft® Windows® environment, the Alt + Ctrl + Delete combination brings up a system window for the user to terminate any process. Under some Unix environments, the Ctrl + C combination will halt the processing and wait for user's further instruction. Thus, the means for receiving these keyboard input is the claimed external interrupt detector.

Referring to claim 7: Olander discloses a programmable calculator including an input unit and output unit (figure 1). Olander's calculator is capable of calculating algebraic statement (claim 1), thus, Olander's processor, which calculating the algebraic statement is the claimed algebraic logic processor. Olander further discloses an interrupt detector (figure 3B, structure 65). Olander's calculator is capable of displaying and prompting user the executing status and error, and user can choose whether to suppress program halt and the error message (claim 6, column 2, lines 8-14). When Olander's calculator detects the error, halts the program, and prompts the error message, it sends an interrupt to the interrupt detector; such interrupt is the claimed request to stop processing.

Olander does not explicitly disclose a counter for counting based on a predefined value, and Olander does not explicitly disclose that the processor continues processing the request while waiting user's input.

Vinson discloses a system processing method, which terminates the process at the timeout (figure 2D, steps 258, 260); and Vincent further teaches that it is known to prompt user the option where to reset the timer for additional time (column 8, lines 43-50).

Although Vinson teaches that it is known to prompt user the option where to reset the timer for additional time, Vincent does not explicitly disclose whether the processor stops processing the task while prompting user the option. Kannan discloses that it is known not to stop the processing or application when an exception/interrupt is raised and user is prompted (abstract).

Hence, it would have been obvious to one having ordinary skill in the computer art to adapt the teachings of Vinson and Kannan onto Olander because Vinson teaches one to properly allocate system resources by prompting user for additional time at the timeout and have user to determine whether additional time is legitimate for further processing, and Kannan teaches one to continue processing while exception is raised so user can save unsaved data and the processing resource won't be wasted while waiting for user's input.

Referring to claim 8: Claim 8 is rejected as the claim 2's argument stated above.

Referring to claim 9: Claim 9 is rejected as the claim 3's argument stated above.

Referring to claim 10: Claim 10 is rejected as the claim 5's argument stated above.

6. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olander in view of Vinson, and in further view of Kannan and Andrew Stanenbaum's "Structured Computer Organization".

Referring to claims 6 and 11: Olander is capable of handling the algebraic expression. IN every algebraic expression, the parentheses have the precedent over any mathematical expression, and the multiplication and division have the precedent over the addition and subtraction. Thus, the basic algebraic expression validation is the claimed determining means for whether the input expression confirms to algebraic logic rules, and the following calculation is the claimed calculating means for calculating the expression. Although the prior art does not explicitly disclose separate hardware in handling these two steps, Stanenbaum discloses that it is known that hardware and software are logically equivalent. Hence, it would have been obvious to one with ordinary skill in the computer art at the time Applicant made the invention to adapt the Stanenbaum's teaching onto Olander, Vinson, and Kannan because Stanenbaum teaches one to interchange hardware and software according to the factors of cost, speed, reliability, and frequency of expected changes.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin King whose telephone number is (703) 305-4571. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephones are unsuccessfully, the examiner's supervisor, Mark Reinhart can be reached at (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703)-306-5631.

Justin King
March 7, 2004

XUAN M. THAI
PRIMARY EXAMINER